

a17  
concl.

26. (New) The camera system according to Claim 16, wherein both the driving control and the operation control are focus control.--

---

REMARKS

Reconsideration and allowance of the subject application are respectfully solicited.

Claims 1 through 26 are pending, with Claims 1, 6, 12, and 16 being independent. Claims 1 through 18 have been amended. Claims 19 through 26 have been added.

The title, specification, and Abstract were objected to as to matters of form, which objections are respectfully traversed, and which are respectfully submitted to have been obviated by the amendment of the same as required. In this regard, it will be appreciated that the first sentence of the Abstract has been removed as kindly suggested in the Official Action, and has been transferred to page 1 of the specification.

Claims 1 through 18 were variously rejected under 35 U.S.C. § 103 over U.S. Patent Nos. 5,420,721 (Kanno, et al.), 6,130,717 (Arai, et al.), 5,191,373 (Nakano), and 5,274,414 (Taniguchi, et al.). All rejections are respectfully traversed.

Claims 1 and 6 recite, inter alia, that in the first mode driving control is effected according to a signal from the camera unit or from the external device, the signal being serial, in combination with a setting circuit for detecting communication of the signal from the camera unit or the external device at power on of a power supply of the lens unit and for setting the second mode when the communication is absent.

Claims 12 and 16 recite, inter alia, that in the first mode driving control is effected according to a signal from the camera unit or from the external device, the signal being serial, in combination with a setting circuit for setting the second mode at power on of a power supply of the lens unit and for thereafter detecting serial communication of a digital signal from the camera unit or the external device, the setting circuit maintaining the second mode when the communication is absent.

However, Applicant respectfully submits that none of Kanno, et al., Arai, et al., Nakano, and Taniguchi, et al., even in the proposed combinations, assuming, arguendo, that the documents could be combined, discloses or suggests at least the above-discussed combinations claimed features as recited, inter alia, in Claims 1, 6, 12, and 16. The Official Action notes that Kanno, et al. fails to disclose serial communication of a digital signal as in Claim 12, and relies upon Arai, et al. in this regard; however, Applicant respectfully submits that there has been no showing of any motivation in any of the cited documents that would lead one having ordinary skill in the art to arrive at the above-discussed combinations of claimed features. By means of such features, Applicant submits that the present invention addresses the problem explained at page 3, lines 1 through 26 of the specification, i.e., a problem concerning the exchange of a serial signal.

The dependent claims are also submitted to be patentable because they set forth additional aspects of the present invention and are dependent from independent claims discussed above. Therefore, separate and individual consideration of each dependent claim is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



Attorney for Applicant

Registration No. 37,838

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200

DSG\lp

DC\_MAIN 101342 v 1



Appln. No. 09/103,398  
Atty. Docket No. 03500.012806  
(35.C1280)

**RECEIVED**

**JUL 08 2002**

**VERSION SHOWING CHANGES TO THE SPECIFICATION** **Technology Center 2600**

Please substitute the following paragraph for the paragraph starting at page 2, line 5 and ending at line 17.

The changeover function between these remote/local modes is provided as an interface between a large-size TV camera unit, used conventionally in studios etc., and the lens unit. The interface between the large TV camera unit and the lens unit is constructed as a system of so-called parallel connection in which each connector pin is assigned to a signal of one function, using a large connector with many pins. In this system a remote/local changeover signal is sent to the lens unit by use of a dedicated wire through one connector pin. Under this setup, the remote/local signal from the CCU or from the camera unit is transmitted to the photographing lens at the same time as turning on of power, so that either the remote mode or the local mode is set instantly in the lens unit.

Please substitute the following paragraph for the paragraph starting at page 3, line 1 and ending at line 13.

However, desires are increasing recently for the autofocus system for outdoor photography as well, and thus the autofocus function is also demanded for the small TV camera units. This raised the necessity for [exchanges] exchange of [many] much information between the small TV camera unit with the autofocus function, and the lens unit. The parallel interface of

the small connector is, however, short of connector pins, and thus a digital serial interface is also added to the existing parallel interface, whereby [exchanges] exchange of [many] much information [are] is made by digital signals. Further, the digital serial interface is provided with the changeover function between the remote mode and the local mode of focusing.

Please substitute the following paragraph for the paragraph starting at page 4, line 2 and ending at line 12. A marked-up copy of this paragraph, showing the changes made thereto is attached.

One aspect of the application is to provide a lens unit or a camera system, the lens unit being connected to a camera unit and being selectively set either in a mode in which control is effected according to a control signal from the lens unit or in a mode in which control is effected according to a control signal from the camera unit, wherein the lens unit comprises a setting circuit for setting the mode in which control is effected according to the control signal from the lens unit, when communication is absent from the camera unit after turning on of power.

Please substitute the following paragraph for the paragraph starting at page 4, line 13 and ending at line 25.

One aspect of the application is to provide a lens unit having a serial interface, wherein when no signal for mode setting is input through a digital serial interface of a small TV camera unit at turning on of power, it is determined that the small TV camera unit mounted is a small TV camera unit without the digital serial interface, and wherein a focus control mode is

automatically set in a local mode for controlling the lens unit by a demand incorporated in or connected to the lens unit, whereby the lens unit with the serial interface can be used in combination with the small TV camera unit without the digital serial interface without any trouble.

Please substitute the following paragraph for the paragraph starting at page 4, line 26 and ending at page 5, line 6.

One aspect of the application is to provide a lens unit or a camera system wherein after turning on of power the focus control mode is first set in the mode in which control is effected according to the control signal from the lens unit and wherein when communication is absent from the camera unit thereafter, the mode in which control is effected according to the control signal from the lens unit is maintained.

Please substitute the following paragraph for the paragraph starting at page 5, line 7 and ending at line 13.

One aspect of the application is to provide a lens unit or a camera system, wherein at turning on of power the focus control mode is forced into the mode in which control is effected according to the control signal from the lens unit and wherein when serial digital communication is absent thereafter, the mentioned mode is maintained.

Please substitute the following paragraph for the paragraph starting at page 6, line 25 and ending at page 7, line 8.

The lens unit 1 is provided with a remote/local changeover switch (SW1) 11 for changeover between the remote mode and the local mode of focus control, a CPUa 12 having a digital serial communication function, a lens focus system 14 [of lens], a focus driving circuit 15 for driving the focus system 14, a lens wobbling system 16 [of lens], a wobbling driving circuit 17 for driving the wobbling system 16, and a display 18. An external focus demand 13, which is manipulated by a cameraman, is connected to the remote/local changeover switch (SW1) 11.

Please substitute the following paragraph for the paragraph starting at page 7, line 17 and ending at line 24.

The small TV camera unit 3 is provided with a CPUb 31 having the serial communication function and a display 32 such as a view finder. The CPUb 31 is connected through the digital serial interfaces to the CPUa 12 of the lens unit 1, whereby the CPUs can exchange [many] much information including information from a remote/local changeover switch 42 as described hereinafter.

Please substitute the following paragraph for the paragraph starting at page 8, line 10 and ending at line 19.

In step 51 the CPU detects power on of the power supply of the lens unit 1. The power to the lens unit 1 is supplied from either the camera unit 2 or the camera unit 3. If the

camera unit 2[,] or 3 and the lens unit 1 are electrically connected before power on of the power supply, the power supply of the camera unit 2[,] or 3 and the lens unit 1 will become [up] on simultaneously accordingly. The lens unit 1 is also allowed to be connected to the camera unit 2[,] or 3 later in a state where the power is already on in the camera unit 2[,] or 3.

Please substitute the following paragraph for the paragraph starting at page 8, line 20 and ending at page 9, line 10.

With detecting power on of the power, the CPU proceeds to step 52 to determine whether there is input of a serial signal (mode setting information, information of manipulation of the focus demand 41, etc.) from the camera unit connected to the lens unit 1. When the camera unit 2 is connected to the lens unit 1, no serial signal is input to the CPUa 12, because the camera unit 2 has no digital serial interface. On the other hand, when the camera unit 3 is connected to the lens unit 1, the CPUb 31 of the camera unit 3 is operating before or starts operating at the same time as the CPUa 12 of the lens unit 1 does, responsive to the up timing of power described above. When the CPUa 12 determines whether a serial signal is input from the camera unit, the serial signal is already outputted from the CPUb 31 of the camera unit 3 or the serial signal will be outputted from the CPUb 31 with a lapse of some time accordingly.

Please substitute the following paragraph for the paragraph starting at page 12, line 19 and ending at page 13, line 10.

From the side of the lens unit 1, there is no difference between the focus control based on the manipulation information of the focus demand 41 of the CCU 4 and the focus



control based on the AF information from the camera unit 3 in the sense that the focus control of the lens unit 1 is carried out according to the information from the camera unit, but it is more convenient for the cameraman to be informed of the difference between the control forms. It is thus desirable in step 55 described above to display setting of the remote mode as described above and to display CCU/AF (the focus control according to the manipulation information from the CCU 4 / the focus control according to the AF information from the camera unit 3) by turning on/off of a display lamp 20 or 13b or to display characters in the view finder, as shown in Figs. 6A and 6B or in Figs. 7B and 7C. In another preferred setup, the three kinds, CCU, AF, and local, may be displayed by turning on of respective display lamps.

Please substitute the following paragraph for the paragraph starting at page 14, line 16 and ending at line 21.

By employing the arrangement wherein the local mode is first set by turning on of power as described, the cameraman, even using the camera unit 2 without the serial interface, can start the focus operation while manipulating the focus demand 13 connected to the lens unit 1 immediately after turning on of power.



Appln. No. 09/103,398  
Atty. Docket No. 03500.012806  
(35.C12806)

**RECEIVED**

JUL 08 2002

**VERSION SHOWING CHANGES TO THE ABSTRACT**

**Technology Center 2600**

[When a lens unit with a digital serial interface was connected to a camera unit

without the interface, there arose the problem that setting was disabled of a mode of the lens unit from the side of the camera unit. The present invention provides a lens unit, solving the above problem, the] A lens unit being connected to the camera unit and being selectively set either in a mode in which control is effected according to a control signal from the lens unit or in a mode in which control is effected according to a control signal from the camera unit, wherein when a signal for setting of mode is not input from the camera unit with a lapse of a predetermined time or more after power on of the power supply, a setting circuit sets the mode in which control is effected according to the control signal from the lens unit.

*[Handwritten mark]*



Appln. No. 09/103,398  
Atty. Docket No. 03500.012806  
(35.C12806)

**RECEIVED**

**JUL 08 2002**

**Technology Center 2600**

**MARKED-UP CLAIM SHEET**

1. (Amended) A lens unit to be connected to a camera unit, said lens unit

comprising:

a control circuit having a first mode in which driving control is effected according to a signal from the camera unit or a signal from an external device and a second mode in which operation control is effected according to a signal from [the] said lens unit, wherein the signal from the camera unit or the external device is serial; and

a setting circuit for detecting communication of the signal from [said] the camera unit or the external device at power on of a power supply of [the] said lens unit and for setting said second mode when the communication is absent.

2. (Amended) The lens unit according to Claim 1, wherein said setting circuit sets a mode according to a communication signal transmitted when [said] the communication is present.

3. (Amended) The lens unit according to Claim 1, wherein said setting circuit sets [said] the second mode when the communication is absent with a lapse of a predetermined time or more from the time of power on of the power supply.

4. (Amended) The lens unit according to Claim 1, wherein said setting circuit sets [said] the second mode when communication of a signal for specifying a mode is absent.

5. (Amended) The lens unit according to Claim 1, wherein said lens unit comprises [an] indication means for indicating a mode set by said setting circuit.

6. (Amended) A camera system [comprising] including a camera unit and a lens unit to be connected to said camera unit, said camera system comprising:

a control circuit having a first mode in which driving control is effected according to a signal from [the] said camera unit or a signal from an external device and a second mode in which operation control is effected according to a signal from [the] said lens unit, wherein the signal from the camera unit or the external device is serial; and

a setting circuit for detecting communication of the signal from said camera unit or the external device at power on of a power supply of [the] said lens unit and for setting said second mode when the communication is absent,

wherein said control circuit and setting circuit are disposed in said lens unit.

7. (Amended) The camera system according to Claim 6, wherein said setting circuit sets a mode according to a communication signal transmitted when [said] the communication is present.

8. (Amended) The camera system according to Claim 6, wherein said setting circuit sets [said] the second mode when the communication is absent with a lapse of a predetermined time or more from the time of power on of the power supply.

9. (Amended) The camera system according to Claim 6, wherein said setting circuit sets [said] the second mode when communication of a signal for specifying a mode is absent.

10. (Amended) The camera system according to Claim 6, wherein said lens unit comprises [an] indication means for indicating a mode set by said setting circuit.

11. (Amended) The camera system according to Claim 6, wherein said camera unit comprises [an] indication means for indicating a mode set by said setting circuit.

12. (Amended) A lens unit to be connected to a camera unit, said lens unit comprising:

a control circuit having a first mode in which driving control is effected according to a signal from the camera unit or a signal from an external device and a second mode in which operation control is effected according to a signal from [the] said lens unit, wherein the signal from the camera unit or the external device is serial; and

a setting circuit for setting [said] the second mode at power on of a power supply of [the] said lens unit and for thereafter detecting serial communication of a digital signal from

[said] the camera unit or the external device, said setting circuit maintaining [said] the second mode when the communication is absent.

13. (Amended) The lens unit according to Claim 12, wherein said setting circuit sets a mode according to a communication signal transmitted when [said] the communication is present.

14. (Amended) The lens unit according to Claim 12, wherein said setting circuit maintains [said] the second mode when the communication is absent with a lapse of a predetermined time or more from the time of power on of the power supply.

15. (Amended) The lens unit according to Claim 12, wherein said setting circuit sets [said] the second mode when communication of a signal for specifying a mode is absent.

16. (Amended) A camera system [comprising] including a camera unit and a lens unit to be connected to said camera unit, said camera system comprising:

a control circuit having a first mode in which driving control is effected according to a signal from [the] said camera unit or a signal from an external device and a second mode in which operation control is effected according to a signal from [the] said lens unit, wherein the signal from the camera unit or the external device is serial; and

a setting circuit for setting [said] the second mode at power on of a power supply of [the] said lens unit and for thereafter detecting communication of the signal from said camera

unit or the external device, said setting circuit maintaining [said] the second mode when the communication is absent,

wherein said control circuit and setting circuit are disposed in said lens unit.

17. (Amended) The camera system according to Claim 16, wherein said setting circuit maintains [said] the second mode when the communication is absent with a lapse of a predetermined time or more from the time of power on of the power supply.

18. (Amended) The camera system according to Claim 16, wherein said setting circuit maintains [said] the second mode when communication of a signal for specifying a mode is absent.